



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/820,259 | 04/07/2004 | Allen Mott | 003C.0004.U2(US) | 7506 |
| 29683 | 7590 | 02/01/2006 | EXAMINER | |
| HARRINGTON & SMITH, LLP 4 RESEARCH DRIVE SHELTON, CT 06484-6212 | | | ORTIZ, ANGELA Y | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1732 | |
| DATE MAILED: 02/01/2006 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/820,259
Filing Date: April 07, 2004
Appellant(s): MOTT ET AL.

MAILED

FEB 01 2006

GROUP 1700

Harrington & Smith, LLP
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed December 14, 2005 appealing from the final Office action mailed July 5, 2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

| | | |
|-----------|-----------------|---------|
| 6,187,242 | Onoda | 02-2001 |
| 6,506,083 | Bickford et al. | 01-2003 |

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 18, 20-22, 25-28, 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Onoda, USP 6,187,242 in view of Bickford et al., USP 6,506,083.

The cited primary reference substantially teaches the basic claimed method of molding a connector for a fuel tank as claimed, comprising the steps of providing at least one electrical conductor 4,5 or 34,35 which are pre-shaped and bent according to the desired configuration of the connector 1 or 31, molding an insulating material around the conductors to form a primary molded body 6 or 36, wherein the primary molded body, readable on a pre-mold housing, is provided with a plurality of ribs such as 8a, 10a and 10b and other unlabeled projections. A secondary molding is formed around the primary molding to form a surrounding structure within which the connector body is disposed after being formed. See figures 2, 3, and 4; also see col. 2, lines 25-45, 47-54; col. 3, lines 30-65. The formation of the ribs creates an interlocking feature, readable on the claimed tortuous path, for impeding the entry of resin or fluid, including hydrocarbons, by providing an effective seal.

The cited primary reference does not teach an electrical conductor with a plurality of ribs as claimed.

The added secondary reference teaches as conventional the feature of an electrical connector comprising an electrical conductor 12 having a plurality of ribs 27 and embedded within an insulating material 14. The interlocking structure 22 is

Art Unit: 1732

provided at ribs 27 to provide a tight pressure seal between the conductor and the insulating material.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a plurality of ribs on the conductor as shown in the added reference, when performing the process set forth in the primary reference, for forming a conductor with a tight pressure seal to prevent the entry of fluid as desired.

With respect to claim 20, note that while PEEK is preferred, other conventional materials may be used; see col. 2, lines 46-53, and such would include polyoxymethylene for the benefit of preventing fuel corrosion.

With respect to claims 21, 22, note that it is well known in the art to provide conventional coatings as claimed for providing a more adherent surface, and it would have been obvious to so include such coating in the process above for yielding increased adhesion as desired.

With respect to claims 26-28, see the primary reference USP 6,187,242 at col. 2, lines 23-55 and col. 3, lines 30-65; and figures 2 and 4 of the cited reference, wherein the claimed limitations are shown and taught.

With respect to claims 30-32, see the added secondary reference at col. 4, lines 5-35 wherein the formation of conventional seals is discussed as desired for the connector; it would have been obvious to include any conventional material, including material which remains uncured in the presence of air as claimed, for effecting a seal as desired.

(10) Response to Argument

Appellants argue that claim 18 is a method claim with features not disclosed in the applied prior art, and that the examiner does not give weight to the claimed rib features.

The applied prior art reference to Onoda, USP 6,187,242, is a patent claiming a method deemed pertinent to the instant claimed method steps, thus the examiner has considered claim 18 as a method in applying the prior art. With respect to the claimed rib features, note that the claimed term "melt rib" has an art recognized definition, and was given considerable weight in the claims indicated allowable over the prior art of record. Those claims which did not set forth a melt rib, but only included ribs as conventionally used in the molding art, were not deemed allowable over at least the prior art combination of Onoda and Bickford as applied above. Appellants argue that claim 18 sets forth a connector body with second ribs comprising a substantially uniform series of ribs looping around the exterior connector body. In Onoda, the disclosed method sets forth a connector useful with fuel tanks, with figure 2 showing a first molded body 6, with at least one rib (core) projection 8 which assists in positioning the body in the mold, and in preventing sink marks when molded a second housing around the connector body, see col. 3, lines 40-65. While Onoda does not show a series of ribs looping around the body, the skilled artisan would have been well motivated to form the ribs provided in any conventional design, particularly in view of Bickford, which teaches a threaded surface (readable on the claimed "series of loops") for making an integral

Art Unit: 1732

attachment with a second plastic body. See Bickford, USP 6,506,083 at col. 3, lines 39-50.

Appellants argue that it is not obvious to combine the references as applied, as there is nothing in the art to suggest the combination.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the skilled artisan would have been motivated to provide ribbed conductors in view of Bickford's teaching that such provide an interlocking feature (see Bickford, USP 6,506,083 at col. 3, lines 15-20); and to shape the ribs on the connector body shown in Onoda, with a series of loops (claim 18) or with circumferential ribs (claim 25) in view of Bickford, for making ribs that form an integral attachment to a second body, or as an obvious alternative equivalent rib structure when forming the desired rib feature (see Bickford, USP 6,506,083 at col. 3, lines 39-50).

Appellants argue there is no disclosure in Onoda of ribs 8a, 10a, 10 looping around the exterior of body 6, or in Bickford of ribs looping an exterior of body 14.

See Onoda, USP 6,187,242, figure 2 and col. 3, lines 40-55 which set forth that the molded body is provided with multiple ribs on its exterior surface arranged in a

Art Unit: 1732

desired, conventional pattern. While Onoda does not set forth that these ribs are shaped or patterned in a loop formation, the added secondary reference sets forth a molded connector with a threaded surface 28, which is a series of circumferential loops, looping around an exterior body. This threaded surface 28 helps to securely engage with a second surface. See Bickford, USP 6,506,083 at col. 3, lines 39-50.

Appellant argues that Bickford does not set forth overmolding onto the threaded surface.

The threaded surface 28 of Bickford merely shows that it is conventional in the art to form circumferential ribs looping around an exterior body. Note that the primary reference to Onoda clearly sets forth molding a connector body by providing conductors, molding a first molding with ribs around the conductors, and then molding a second molding around the first as discussed above. To shape the ribs in any conventional form is well within the level of ordinary skill in the art, and a conventional configuration is demonstrated in the Bickford reference.

With respect to claim 20, note that while PEEK (polyetherketone) is preferred, other conventional materials may be used; see col. 2, lines 46-53 of USP 6,506,083, and such would include polyoxymethylene for the benefit of preventing fuel corrosion.

With respect to claims 21, 22, note that it is well known in the art to provide conventional coatings as claimed for providing a more adherent surface, and it would have been obvious to so include such coating in the process above for yielding increased adhesion as desired.

Art Unit: 1732

With respect to claims 26-28, see the primary reference USP 6,187,242 at col. 2, lines 23-55 and col. 3, lines 30-65; and figures 2 and 4 of the cited reference, wherein the claimed limitations are shown and taught.

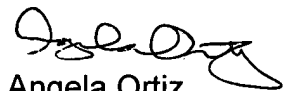
With respect to claims 30-32, see the added secondary reference at col. 4, lines 5-35 wherein the formation of conventional seals is discussed as desired for the connector; it would have been obvious to include any conventional material, including material which remains uncured in the presence of air as claimed, for effecting a seal as desired.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

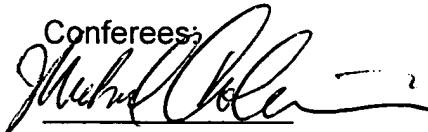
For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



Angela Ortiz
Primary Examiner
Art Unit 1732

Conferees:



Michael Colaianni



Roy King